

## **REMARKS**

Very thanks for Examination's suggestion and thanks for finding some citations about the present invention, thereby, the applicant may know more information about the invention. This case has been carefully reviewed and analyzed in view of the office action.

Examiner has kindly provides reference prior arts about the present invention, and thus the applicant has more information about the invention. All details of the reference prior arts are fully considered and compared with the present invention.

Indeed the citations disclose some features of the present invention, and the applicant agrees with these viewpoints, however applicant discovers that some features of the present invention are not wholly disclosed by the citations, which are claimed in the original specifications and especially drawings.

In this amendment, the applicant decides to cancel Claims 1 to 9, without prejudice or disclaimer of the subject matter thereof, and add new claims 10 to 15. The added new claim 10 is the incorporation of the original claims 2, 3 and 4. The added new claim 11 adds the features in the original claim 5 to the new claim 10. The added new claim 12 adds the features in the original claim 6 to the new claim 10. The added new claim 13 adds the features in the original claim 7 to the new claim 10. The added new claim 14 adds the features in the original claim 8 to the new claim 10. The added new claim 15 adds the features in the original claim 9 to the new claim 10. The relations of the new claim with respect to the original claims are shown in the following:

## **COMPARISON OF NEW CLAIMS WITH ORIGINAL CLAIM**

~~1. A semiconductor waste gas treating apparatus~~

BEST AVAILABLE COPY

~~having the ability of preventing sedimentation and etching of filth, said apparatus comprises a header 1 and a waste gas treating trough 2 mounted below said header and having at the center thereof a reaction room 21, and is characterized by: said reaction room 21 is surrounded by a water receiving chamber 22 outside of it, said water receiving chamber 22 is provided on the top thereof with an annular spillway 223 in communicating with said reaction room 21; water in said water receiving chamber 22 is smoothly and uniformly distributed to said annular spillway 223, and spills to said reaction room 21 to form an annular water wall on the wall of said reaction room.~~

Claim 10. (New claim)~~2.~~ A semiconductor waste-gas treating apparatus having the ability of preventing sedimentation and etching of filth, wherein said apparatus comprises a header, a waste gas treating 2 trough and an annular guide 3 in which said waste gas treating trough 2 is mounted below said header 1 and has at the center thereof a reaction room 21, said apparatus is characterized by:

said reaction room 21 is surrounded by a water receiving chamber 22 outside of it, said water receiving chamber 22 is provided on the top thereof with an annular spillway in communicating with said reaction room; and said annular guide 3 is mounted at said annular spillway 223, by guiding of said annular guide 3, water is smoothly and uniformly distributed to said annular spillway, and spills to said reaction room to form an annular water wall 41 on the wall of said reaction room; and =

~~3. A semiconductor waste gas treating apparatus having the ability of preventing sedimentation and etching~~

BEST AVAILABLE COPY

~~of filth as claimed in claim 2,~~ wherein, said water receiving chamber 22 is provided with a water inlet 221 and a water discharge outlet 222; and =

~~4. A semiconductor waste gas treating apparatus having the ability of preventing sedimentation and etching of filth as claimed in claim 2,~~ wherein, a sensing probe 224 is provided in said annular spillway 223 to detect whether there is water entering said water receiving chamber.

Claim 11. (New claim) ~~5.~~ A semiconductor waste-gas treating apparatus having the ability of preventing sedimentation and etching of filth as claimed in claim 10 ~~2~~, wherein, said header is provided with a sensing probe used to sense the reaction temperature in a reaction room.

Claim 12. (New claim) ~~6.~~ A semiconductor waste-gas treating apparatus having the ability of preventing sedimentation and etching of filth as claimed in claim 11 ~~5~~, wherein, said sensing probe is provided therearound with a plurality of hydrogen spraying nozzles and a plurality of waste gas delivery pipes for delivering hydrogen and semiconductor waste gas.

Claim 13. (New claim) ~~7.~~ A semiconductor waste-gas treating apparatus having the ability of preventing sedimentation and etching of filth as claimed in claim 12 ~~6~~, wherein, said hydrogen spraying nozzles are provided each with a fire spraying port on the front end thereof.

Claim 14. (New claim) ~~8.~~ A semiconductor waste-gas treating apparatus having the ability of preventing sedimentation and etching of filth as claimed in claim 10 ~~2~~, wherein, said annular spillway is provided with no sensing

REST AVAILABLE COPY

probe.

Claim 15. (New claim)~~9~~ A semiconductor waste-gas treating apparatus having the ability of preventing sedimentation and etching of filth as claimed in claim 2, wherein, said annular guide is provided on the top thereof with an annular flange.

(A) As comparison with the citation USP5,603,905

From the structure view of the present invention with the citation

(1) In citation, the element 51 of the USP5,603,905 is a water trough (or a water receiving trough) is not as the waste-gas treating trough 2 of the present invention.

(2) In the present invention, the water wall 41 is formed on the reaction room 21. However, in the citation USP5,603,905, the element with similar function of the reaction room 21 of the present invention is the combustion zone 31 (to remove harmful material in the waste gas by combustion). However, the combustion zone 31 of the citation has no water wall. In the citation, the water wall is formed on an inner wall of the column 50. Thereby, the combustion zone 31 of the citation, USP5,603,905, can not overcome the problem of adhering dirt and rusting on the wall of the combustion zone 31.

(3) In the present invention, it is illustrated that an annular guide 3 is installed within the annular spillway for guiding the water to uniformly distributing in the spillway 221. Then water flows to the whole reaction chamber 21 so as to form an annular water wall 41 in an inner wall of the reaction chamber 21. However, the citation, USP5,603,905, there is no annular guide is installed. In the citation, an annular spillway (between the elements 50 and 51) is installed above the water receiving chamber 51 which is communicable to the reaction room 31, but no annular guide is installed in the annular spill

BEST AVAILABLE COPY

way. Thereby, the effect of uniform distributing and guiding water is not as good as the present invention.

(4) Referring to Fig. 3 of citation, the reaction room 31 is arranged above the water receiving chamber 51 instead of being at an outer end or periphery thereof. However, in the present invention, the reaction room 21 of the present invention is enclosed by the water receiving chamber. Thereby, the present invention is different from the citation.

(5). In the citation, USP5,603,905, a metal fiber or ceramic porous layer 39 is installed between the water receiving chamber 51 and the reaction room 31 for spacing with the inward screen flange 37 (see lines 6 to 11, column 5 of the citation), but no such design is used in the present invention.

(6) In the citation, USP5,603,905, the water receiving chamber 51 has only one water inlet 52, but no discharge outlet (as disclosed in the present invention). Moreover, the discharge outlet 55 of the citation, USP5,603,905, is not identical to the discharge outlet 222 of the present invention.

(B) As comparison with the citation USP2,545,028, the water-gas treating apparatus is different from the present invention.

a. The USP2,545,028 discloses a heat exchanger, instead of the waste-gas treating apparatus of the present invention.

b. Although the annular guide (central disposed tube 16) in the citation 2 serves to the increase the flow speed of water, the water in the tank helically flows downwards. However, in the present invention, the water flows upwards to be over the inner wall so that the water uniformly covers upon the wall surface to protect the wall from dusting and rusting. Thereby, the annular guide of the second citation is not suitably to be used to object the present invention. It can not achieve a desired effect.

(C) As comparison with the citation USP4,304,570, a method of separation of sulfur from a scrubbing liquid discloses a sensing probe which is in an environment different from the present invention. The sensing probe in this citation is not installed in the water receiving chamber as that in the present invention.

Since in above discussion, it is apparent that no prior art has the features of the present invention, especially in new claim 10. Furthermore, as we know that no other prior art has features of the present invention. Thus, the present invention is novel and inventive.

It is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectively requested.

Respectfully submitted.

*Feng Wu Nang*

Dated: 09 / 07 / 2004

235 Chung - Ho Box 8-24

Taipei Taiwan R. O. C.

REST AVAILABLE COPY